DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/09 has been entered.

Response to Amendment

2. The amendment filed on 10/14/09 has been entered. Claims 29 and 34 have been amended. Claims 1-28 have been cancelled. No claims have been added. Claims 29-34 are currently pending in this application, with claims 29 and 34 being independent.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 29, 30, 33, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Farnham, et al **(US PG Publication 2005/0163070)**. From now on,

Farnham, et al, will be referred to as Farnham.

Regarding claims 29 and 34, Farnham teaches a communication apparatus and method for data communication with at least one terminal, and for controlling a communication timing by detecting transmission characteristics, which vary periodically at a predetermined frequency according to an AC power supply, in a transmission path to the terminal, said communication apparatus comprising: a receiver operable to receive a plurality of packets from the terminal at a plurality of transmission timings of packets within one cycle of said predetermined frequency of said AC power supply **(A base station comprises air interfaces for receiving information, where receptions over a first interface are scheduled accordingly so as not to interfere with receptions over second air interface due to interference from receptions over said first interface, predetermined QoS levels are used to reduce delays during specific time slots and are related to signal transmissions at a predetermined frequency, and power levels are varied accordingly to reduce said interference, Paragraph 28, Paragraph 5, Paragraphs 7-11, Paragraph 41, lines 1-3, Paragraph 46, lines 1-6 and Paragraph 47)**, and to generate information regarding a receiving condition of the received packets through said transmission path affected by said AC power supply **(Interference measures are taken for received packets, and said power levels are varied accordingly to reduce said interference Paragraph 5 and Paragraph 6, lines 1-3 and Paragraph 7)**; a detector operable to detect, based on said information regarding the receiving condition of the received packets, an interval at

which an error rate is higher than a specified threshold within said one cycle of said predetermined frequency of said AC power supply, said interval representing a transmission path fluctuation period in which the transmission path is affected by said AC power supply **(An interval is detected during which a certain predetermined Quality of Service (QoS) level is not possible due to said interference, where said base station of Figure 4a uses error rate to predict receiving condition, receives packets from mobile stations at different signal levels, and said interference causes fluctuations in signal transmission, and said power levels are varied accordingly to reduce said interference, Paragraph 5, Paragraph 6, lines 1-7, Paragraph 7, Paragraph 11, Paragraph 41, lines 1-3, Paragraph 46, lines 1-6 and Paragraph 47)**;

Regarding claim 30, Farnham teaches the communication apparatus as described in claim 29, wherein said receiver is operable to detect, for each of said received packets, whether or not an error exists **(An interference level is detected at a first channel, Paragraph 7, lines 5-8)**, and to generate an error signal upon detection of each error, and wherein said detector detects an error rate distribution to detect the interval at which the error rate is higher than the specified threshold **(A performance assessment function 25a within said base station passes this information to scheduler 24a to determine whether a specific QoS level can be achieved during specific time slots, Paragraph 46, lines 10-15 and Paragraph 47, lines 1-5)**.

Regarding claim 33, Farnham teaches the communication apparatus as described in claim 29, wherein said receiver generates, upon receipt of packets from the terminal, transmission path information based on the received packets **(Interference measures over transmission channels are taken for received packets, Paragraph 6, lines 1-3 and Paragraph 7)**, and wherein said detector detects the interval at which the error rate is higher than the specified threshold based on said transmission path information **(An interval is detected during which a certain predetermined Quality of Service (QoS) level is not possible due to said interference, where said base station of Figure 4a uses error rate to predict receiving condition, and predetermined QoS levels are used to reduce delays during specific time slots and are related to signal transmissions at a predetermined frequency, Paragraph 6, lines 1-7, Paragraph 7, Paragraph 11, Paragraph 41, lines 1-3, Paragraph 46, lines 1-6 and Paragraph 47)**.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farnham, in view of Fahim **(US Patent No. 7,042,972)**.

Regarding claim 31, Farnham teaches the communication apparatus as described in claim 30, further comprising: a periodic signal generator operable to generate a periodic signal at said predetermined frequency **(Transceivers within said base stations transmit signals during said time slot where signals are transmitted at said predetermined frequency related to said predetermined QoS level, Paragraph 29, lines 1-4, Paragraph 30, lines 1-10, Paragraph 32 and Paragraph 38, lines 9-18)**, wherein said receiver is operable to receive a plurality of packets transmitted from the terminal during a plurality of cycles of said predetermined

frequency **(Said base station receives a plurality of packets from said mobile terminal during a plurality of cycles at said predetermined frequency related to said predetermined QoS level, Paragraph 5).** Farnham does not teach said detector detects a phase of each of the error signals relative to said periodic signal, and detects the error rate distribution by counting the number of errors at various phases during the plurality of cycles of said predetermined frequency. Fahim teaches said detector detects a phase of each of the error signals relative to said periodic signal, and detects the error rate distribution by counting the number of errors at various phases during the plurality of cycles of said predetermined frequency **(An integrated circuit comprises a control unit that counts and detects phase errors, where said phase error information is used to correct phases of received signals, Column 2, lines 14-23, Column 15, lines 1-7, Claims 25 and 30)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Farnham to incorporate this function into the control unit of the Base Station for the benefit of added transmission efficiency.

Regarding claim 32, Farnham, in view of Fahim, teaches the communication apparatus as described in claim 31. Farnham further teaches said periodic signal generator detects an AC power source voltage or current and generates said periodic signal based on the detected AC voltage or AC current **(A transmission management function (TM) receives said QoS and interference level information related to power level from said transceivers, where said TM function uses this information**

to inform transceivers to transmit subsequent signals at a power level related to said QoS level during said time slot, Paragraph 29, lines 1-4, Paragraph 30, lines 1-10 and Paragraph 32).

Response to Arguments

9. Applicant's arguments with respect to claims 29-34, filed 10/14/09, have been considered but are moot in view of the new ground(s) of rejection necessitated by the new limitation(s) added to claims 29 and 34. See the above rejection of claims 29 and 34 for the relevant citations found in Farnham disclosing the newly added limitation(s).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANK DONADO whose telephone number is (571) 270-5361. The examiner can normally be reached Monday-Friday, 9:30 am-6 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-270-6361.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

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/Frank Donado/
Art Unit 2617

/Rafael Pérez-Gutiérrez/
Supervisory Patent Examiner, Art Unit 2617